APX

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User-Written Software for ATARI Home Computers

JUNE 22, 1941

12   EASTERN FRONT 1941 *
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EASTERN FRONT 1941
A one player simulation of German Invasion of Russia
(teens and up)

Cassette: 16K (APX-10050)
Diskette: 32K (APX-20050)

Requires:
One ATARI Joystick Controller

Entertainment

EASTERN FRONT (1941)

by
Chris Crawford

Program and Manual Contents © 1982 Chris Crawford

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Contents

Overview

EASTERN FRONT (1941) is a simulation of Operation Barbarossa, the German invasion of Russia during World War II. The campaign that this invasion started lasted nearly four years and swept away perhaps 20 million lives. You play the part of the German commander, maneuvering your combat units to obtain a good position before the winter sets in and the Russian counteroffensives begin.

This is an exceptionally complex game. You should read this manual thoroughly before attempting to play the game. If you try to play the game before you have digested the rules, you will probably become confused and frustrated. If you're new to wargames, you may find some of the concepts strange. All of the factors in the game have been put in for good reasons; the game really does make sense. If you go through the trial run, read the explanations, and think them over, you'll have a more enjoyable and rewarding experience than you would have by just grabbing a joystick and starting to play.

Required accessories

- Cassette version

    16K RAM
    ATARI 410 Program Recorder

- Diskette version

    32K RAM
    ATARI 810 Disk Drive

- One ATARI Joystick Controller

Loading EASTERN FRONT into computer memory

1. Remove any program cartridge from the cartridge slot of your computer.

2. Plug your Joystick Controller into the first controller jack at the front of your computer console.

3. *If you have the cassette version of EASTERN FRONT:*

   a. Have your computer turned OfF.

   b. Insert the EASTERN FRONT cassette into the program recorder's cassette holder and press REWIND on the recorder until the tape rewinds completely. Then press PLAY to prepare the program recorder for loading the program.

   c. Turn on the computer while holding down the START key.

   d. When you hear a beep, release the START key and press the RETURN key. The program will load into computer memory and start automatically.

   If you have the diskette version of EASTERN FRONT:

   a. Have your computer turned OFF.

   b. Turn on your disk drive.

   b. When the BUSY light goes out, open the disk drive door and insert the EASTERN FRONT diskette with the label in the lower right-hand corner nearest to you.

   d. Turn on your computer and TV set. The program will load into computer memory and start automatically.

Once the program begins, you may find the colors more appealing if you turn up the brightness control on your television set monitor.

Trial run

Begin with a trial run to familiarize yourself with the mechanics of the game.

Touring the map

You'll see a map of a portion of Russia. In the center of the map is a square pink cursor. (Because of adjustment differences between different televisions, colors on your television screen may not be the same as in the description.) Pushing the joystick will cause the cursor to move. When the cursor bumps into the edge of the screen, the entire map image will scroll to reveal other portions of the map. The white boundary marks the edge of the map.

Wander over the map to familiarize yourself with the terrain. Some symbols are not immediately obvious. Swamps are marked by a group of blue v-shaped symbols. Cities are white arrays of tiny rectangles. Mountains are orange triangles. Military units come in two shapes and two colors. Squares with x's in them indicate infantry units. Squares with smaller squares inside them (they are supposed to be ovals) indicate armored or cavalry units. Red units are Russian; white units are German or German allies. A map of the entire theater of operations is included at the end of this manual.

Inspecting units

Place the cursor on any unit and press the red joystick button. The unit disappears, revealing the terrain underneath it. The cursor lights up to indicate that you have a unit in the cursor. Vital information on the unit displays in the dark orange text window at the bottom of the screen. The unit's designation is on the upper line; its strength is on the lower line.

There are two measures of strength. The first is muster strength, which measures how many men, tanks, and guns the unit has. The second is combat strength, which measures how effectively these resources can be brought to bear in battle. There is a difference between the two because no military organization operates perfectly in the shock of battle. The chaos and crisis of combat generates confusion within the organization, which prevents it from fully deploying all of its strength. Loss of supplies can have a similar effect. The combat strength of the unit measures how much of the unit's military potential can be brought to bear by the commander.

The unit's designation is provided for purposes of historical color only. It does not affect the play of the game in any way. The unit type (infantry, militia, armor, panzer, or cavalry) is significant to the play of the game. Infantry or militia units (shown as a square with an X) move more slowly than armor, panzer, or cavalry units (shown as a square with a smaller square inside). The unit strengths are measured in arbitrary units not directly related to the absolute numbers of men, tanks, or guns.

Giving orders

If the unit is a German unit, a yellow cross appeared underneath the unit when you pressed the button. The cross is the Maltakreuze, or maltese cross, and has been a symbol of the German nation for many years. In this game, the Maltakreuze marks the current objective of a German unit.

While still holding down the button, press the joystick in any direction (except diagonal). You hear a feedback beep and the Maltakreuze moves one step in the direction indicated by the joystick. Release the joystick and the beep stops. You have just given one order to that unit. A green arrow appears at the unit's location and travels to the Maltakreuze, thereby indicating the path that the unit will take.

You can add more orders by pressing the joystick in another direction, or the original direction, and releasing it after each order. Each time you do, the Maltakreuze steps in the direction you indicated. You can enter a maximum of eight orders for each unit. If you try to add more, a nasty buzzer sounds and an error message appears in the yellow text window. If you release the red joystick button, you must wait for the Maltakreuze to appear before you can add more orders. If you make a mistake in giving orders, you can erase your existing orders by pressing the space bar on the keyboard while pressing the red button. The Maltakreuze will return to the location of the unit in the cursor and you can start over.

Executing orders

Give orders to several units in the same vicinity. When you're done, press the START button and watch them closely. The computer executes the orders you have given your units. It attempts to move them according to the rules of movement. If a unit attempts to enter a position held by an enemy unit, the computer resolves the resulting combat according to the rules of combat. Whenever a battle occurs, the computer makes a gunshot sound. The many battles fought during movement execution generates a sound rather like a machine gun. The computer also flashes the defending unit in solid color. Thus, you can hear and see the process of combat.

New turn sequence

Once the move is completed, the computer takes about three seconds to perform a variety of calculations related to the passage of time. It updates the date message at the top of the screen and figures the passage of the seasons. It brings any reinforcements onto the map and adds replacements to units already on the map. It figures logistics and imposes penalties on units that are out of supply. It figures your current point score and posts it on the upper left corner of the dark orange text window. Finally, it notes if you have any reinforcements this turn; if so, it places an asterisk in the upper right corner of the dark orange text window to remind you. When it's done, it prompts you to begin entering your orders for the next turn. The game proceeds until March 29, 1942, when your performance is evaluated and you are assigned a score.

This completes the trial run. Now read the rest of the manual before playing your first real game of EASTERN FRONT 1941. The remaining sections discuss in detail each of the major subsystems of the game. Each topic begins with an explanation of the historical background for that section of the rules.

Movement

Historical background

Movement is just as important a component of modern war as firepower. Napoleon's adage, "Impact equals mass times velocity", is still true. Indeed, the "Blitz" in Blitzkrieg refers to the speed of motion of the attacking units. Thus, the primary effort in any general's job is figuring out how to move all the troops as quickly as possible.

Numerous factors make this job difficult. First, many geographic factors combine to slow the troops down. The open steppes were excellent places for high-speed maneuvers, but swamps, rivers, mountains, and forests all slowed the units down. Second, weather could have a serious impact on the mobility of the combat units. Third, traffic jams often developed which tied up thousands of troops in gigantic snarls. Fourth, movement is simultaneous, meaning that orders given on one day may not work when they are executed. The general must somehow prepare his orders with all these factors in mind.

Mechanics

Movement is executed by a process that simulates real-time motion. Each turn is divided into 32 subturns. A unit ordered to move into a square does not do so immediately. Instead, there is a delay of several subturns before it does so. The amount of delay depends on the terrain being entered, the type of unit, the season, and the presence of other units.

Open sea provides the longest delay, so long that no unit will ever enter an open sea square. Swamps provide the next longest delay. Next come rivers and coastline squares. Then come forests and mountains. Cities impose only a small delay and clear terrain offers the least delay. Units may not cross narrow sections of sea or lake. The exception to this rule is the crossing at the Kerch Straits, connecting the Sea of Azov with the Black Sea. Units can cross there.

Armored units move faster than infantry units, except during mud season. Russian militia units cannot move of their own accord. They can retreat normally but cannot attack or move on their own.

Zones of control

Historical background

The standard unit in this game, the corps for the Germans and the army for the Russians, would typically have thirty to fifty thousand men in it. However, if you were to fly over the unit on the battlefield, you would not see 50,000 men congregated together in a large mass. Instead, you would see many of the troops occupying the front lines, with a smaller number behind the lines acting as local reserves. Thus, the strength of the unit would be stretched out in a long line.

Depicting this on a wargame map is difficult. The only way to do it accurately is to stack up lots of units shoulder to shoulder. There would be too many units for one person to control in any reasonable way. Wargame designers have developed a solution to this problem called the Zone of Control. The Zone of Control is a region surrounding a unit which restricts the motion of enemy units. You might imagine it to

be like a force field around a unit. It is supposed to represent a portion of the unit spread out into nearby squares. Its real purpose is to keep the number of units in the game down to a reasonable level.

Mechanics

No unit can enter a square already occupied by a friendly unit. If a unit finds that its orders would take it into a square already so occupied, it politely waits until the blocking unit vacates the square.

The motion of units is hampered by the existence of zones of control created by enemy units. Each unit exerts a zone of control into the squares around it as shown in the following diagram:
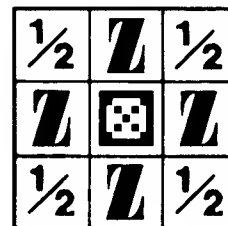

Figure 1   Zones of Control

A square marked Z has a zone of control. A square marked 1/2 has a zone of control only if another nearby friendly unit casts at least a half zone of control into it. A unit's motion is affected by enemy zones of control only, not by friendly zones of control.

No unit may move from one enemy-controlled square to another enemy-controlled square (exception: see Combat discussion). Units may move into or out of enemy-controlled squares, so long as they do not move directly from one enemy-controlled square to another. For example, the movement shown on the left is legal, but the movement shown on the right would not be allowed.
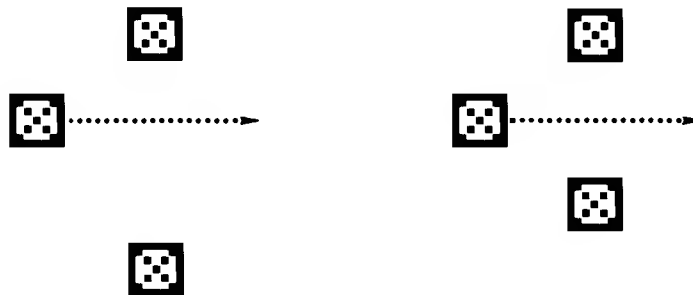

Figure 2   Movement in enemy-controlled squares

Combat

Historical background

Combat on the Eastern Front on the scale of corps and armies normally took one of three avenues. Sometimes it was nothing more than a bloody bashing match in which thousands died but neither opponent was badly enough damaged to give way. This was particularly frequent with Russian attacks. German attacks would frequently pierce the Russian unit and the Germans would pour through. German tactical skill played as much a part in this as Russian blundering. The third type of resolution obtained came infrequently at this stage of the war: the Russians would attack with such overwhelming strength that the German defenders would be crushed. In all types of battles, the Germans demonstrated better group cohesion than the Russians. They stood up and stayed fighting under conditions which would have precipitated collapse in their Russian counterparts. This was an important element in the early successes of the German army.

Mechanics

Combat occurs whenever a unit attempts to enter an enemy-occupied square. This triggers a series of small battles. In each small battle, each unit attempts to inflict losses on the other. The probability that a unit will succeed in inflicting losses on its opponent is proportional to its combat strength. This probability is affected by terrain. Units defending in forest, mountains, or cities enjoy a defensive bonus. Units attacking from a river square suffer a penalty. The probability is also affected by the motion of the defender. Stationary defenders put up a better fight than moving ones. If the attempt to inflict losses succeeds, the opponent's muster strength is reduced by 1 and its combat strength is reduced by 5. Both units continue to slug it out until either the turn ends or one unit breaks. A unit breaks when its combat strength falls below its threshold for breaking. For German units this threshold is one half of the muster strength; for all other units the threshold is three quarters of the muster strength. Thus, German units can stand up and fight longer than other units can.

When an attacking unit breaks, it simply stops attacking. When a defending unit breaks, it must retreat. No unit may retreat into another unit, enemy or friendly. Furthermore, no unit may retreat into an enemy zone of control. A retreating unit first attempts to retreat directly away from its attacker; if the path is blocked it tries to go to the side. It loses 5 combat strength points each time its path is blocked. If the defender retreats, the attacker immediately advances into the defender's square. This happens regardless of the presence of enemy zones of control. If at any time a unit's combat strength reaches zero, the unit is destroyed and removed permanently from the map.

Units reorganize themselves automatically, thereby recovering combat strength. If no other processes act to deplete its combat strength, a unit eventually recovers all of its combat strength up to the limit of its muster strength. The rate of recovery depends on the muster strength of the unit. Large units recover combat strength faster than small ones.

Finnish units cannot attack; they defend normally.

These rules emphasize the organizational aspect of warfare over the brute force aspect. A simple frontal assault causes only some small losses on both sides without achieving decisive results. However, by concentrating a great deal of power on a single enemy unit you can push a unit below its threshold in a single turn. The losses it suffers when it breaks are much higher than the losses that can be inflicted by simple firepower. Furthermore, if the unit can be surrounded or otherwise denied a retreat

route, it can be annihilated with far less effort than a simple frontal push. The emphasis is thus placed on maneuver (for surrounding) and concentration (to break the unit).

Logistics

Historical background

Modern war depends on the prompt provision of large quantities of materials for the fighting troops. The amount of supplies consumed by an army is truly staggering. A typical German corps during this period required about 150 tons of supplies every day. Supplies included ammunition, food, .fuel, clothing, weapons parts, and medical supplies. Of these, ammunition was normally the largest portion. A single artillery piece can shoot off a ton of shells in a few minutes. A machine gun can run through 50 pounds of ammunition in the same time. It is easy to see then that supplies are vital to the combat effectiveness of any modern army.

Mechanics

Supplies are provided automatically to every unit that can trace a supply path to its edge of the map (exception: see Seasons). The Russian supply source is the east edge of the map. The German supply source is the west edge of the map. A supply path is traced by starting at the unit and heading straight for the map edge. The supply path is not affected by terrain, except open sea. The supply path can be blocked by enemy units or enemy zones of control. However, enemy zones of control are negated by the presence of friendly units for the purpose of evaluating supply. The path of supply need not be a straight line; it can bend around intervening blockages. However, it cannot twist and turn too much. When a unit's path of supply is threatened by enemy units in its rear, the evaluation of supply has a small random element in it. Thus, in tricky situations it is not possible to know precisely whether a unit will get supplies. Russian units cannot trace supply across open sea; German units can. Russian supply lines can be more convoluted than German supply lines.

Supply paths are traced and evaluated at the beginning of each weekly turn. The process takes about three seconds, during which time you cannot enter orders. Russian units in supply get replacements to augment their muster strength, amounting to two additional muster strength points per turn. German units and any Russian units that are out of supply get no replacements. Units out of supply have their combat strength cut in half. If a unit remains out of supply for several turns, the cumulative result of loss of supply can be devastating but not sufficient to destroy the unit.

Seasons

The character of the war changed dramatically as the seasons changed. During the dry summer season, the Germans could take full advantage of their superior mobility and flexibility to wreak great destruction on the Soviets. When the mud season arrived in October, the German vehicles were mired and the German armies ground to a halt. Later, when the winter started, the Germans were back in business. Their successes in early winter soon evaporated as the temperature fell. The soldiers froze and the equipment malfunctioned.

Mechanics

To simulate the effects of the Russian weather, certain seasonal effects have been added. There are three seasons, each indicated by a ground color. Summer season is indicated by brown ground. Mud season is indicated by grey ground. During mud, all movement and combat slow to a crawl. All German units lose supply. Thus, not much happens during mud season. This gives both sides a chance to catch their breaths. Of course, time is working in the Russians' favor, so mud is ultimately a bad time for the Germans. Winter is indicated by white ground. During winter, mobility is better than in mud season but not as good as in summer. German units that can trace supply lines might nevertheless lose supply. This is meant to stimulate not only the supply situation but also the precipitous drop in combat efficiency the Germans experienced when the winter set in. Supplies did get through, but engines froze, guns jammed, and men suffered frostbite. The effect on combat strength was approximately the same as a loss of supplies. The farther east a German unit is, the smaller the chance that it will get supplies.

End of game

The game lasts until March 29, 1942, which is the forty-first turn. The score you reach on that turn (which is posted in the upper left corner of the orange text window) is your final game score. Victory points are earned by projecting as much muster strength as far to the east as possible. Victory points are lost for allowing the Russians to push combat strength to the west. Thus, maximum victory points are gained by moving as many muster strength points as far to the east as possible, while destroying as many Russian combat strength points as possible and pushing the remainder to the east. In addition, capturing and holding Moscow gains you 20 points. Lenigrad, Stalingrad, and Sevastopol are each worth 10 points.

The highest possible score is 255 points. It isn't difficult to achieve this score during the course of the game, but it's very difficult to maintain it right to the end of the game. The game has been playtested many, many times, but we don't know if our playtesters' scores are representative of the scores that you might earn. Our own experience is that any score above 200 is excellent, while a score between 100 and 200 is very good. From 50 to 100 is good, and less than 50 points is not so good. Scores of 0 are common. This is a difficult game.

Handicap

EASTERN FRONT has a handicap provision for beginning players. If you press the OPTION key at any time, the muster strength of your troops increases by 50 percent. It's best to exercise this option immediately upon beginning the game, when it will give you a large handicap in your battles with the Soviets. However, there is a penalty for using the handicap option: your score will be halved. Therefore, use this option only until you can beat the Russians enough to capture and hold Moscow. Thereafter, refrain from using it. When you use the handicap option, the text window changes color from a dark orange to a tan color, as a reminder. You can use the handicap option only once during the course of a game.

Restarting the game

There is no provision for restarting this game nor is there a provision for saving the game for later retrieval. After all, the game takes about two or three hours to play.

Computer thinking

The computer plans its move while you plan yours. It considers its units one by one, plotting a move for each one. Initially the move it plans is rather clumsy, but the more time you give it to work on the move, the better the move will be. Don't try to hurry your move to give the computer less time to think. With the computer working at 1.79 Megahertz, the odds are that you will be the only one to suffer from lack of time.

Hints on strategy and tactics

The basic flow of this game is very similar to the historic sequence of events. The Germans sweep in, wiping out Russian armies right and left. But the Russians keep fielding new armies and the Germans, depleted by a long campaign, start to run out of steam as they approach Moscow. They reach Moscow just as the mud season sets in but are unable to take it. When winter starts, they resume their offensive and make further gains but are unable to achieve decisive results. Their rapidly fading strength and the growing strength of the Russians combine to first halt their advance and then turn it into a retreat. That's what should happen. The game does a fair job of duplicating that performance.

The strategies required to do all this revolve around mobility and concentration of strength. The armored units must be concentrated at weak points in the Russian line. Once the line is breached, the armored units must be poured through the hole without hesitation. After penetrating to the Russian rear, they must turn to encircle the retreating Russian armies. In so doing, they will place both themselves and the Russians out of supply. The Russians will frantically try to escape from the trap and will hurl themselves at the beleagured panzer corps. The deciding factor is the speed of the German infantry corps. Will they be fast enough to destroy the Russian armies before the Russians destroy the Panzers?

If you handle your armies with skill and nerve, you can succeed. Be careful not to get your Panzer corps too far ahead of the infantry or they will be cut to shreds. You cannot afford to lose any Panzer corps during summer. Do not attempt to bite off more than, say, six Russian armies at a time. It is very difficult to reduce a pocket with too many Russians in it.

Plan the paths of attack of your units carefully. Sloppy planning only produces traffic jams. You don't have time to sort out all the traffic jams. Get the orders right in the first place. Mobility is your biggest advantage over the Russians. Keep the army moving. Don't allow yourself to be bogged down in frontal attacks. Find the weak spot and concentrate your armor on it. When you have made a breakthrough, send one unit onto each shoulder of the hole to pin the retreating Russian units. This prevents them from interfering with the deep penetration of the armored units.

Often you will cut off a single Russian army from the rest of the line. Don't waste valuable troops mopping it up. Only two corps, one on either side, will finish it off.

The Russian winter counteroffensive is a frightening experience. The Russians look overwhelmingly powerful. They cannot be stopped. They can be slowed. With good generalship, your losses can be minimized. Don't fight for every inch of ground. Give ground as necessary. Keep a small mobile reserve of armor. Cut off its supplies, starve it, then finish it off. This mobile defense requires great skill but is very effective in slowing the Russian steamroller. Don't be alarmed when your point score steadily falls through the winter. This is the normal result of the Russian winter offensives.

Remember the winter supply rule: the farther east your troops are, the fewer supplies they get. You should plan to pull back your troops during the winter to get better supplies. It gives the troops some time to recover from the beating as well as giving them better supplies.

A final comment: this game is complex. In your first playing you will probably botch it. Don't feel bad. It takes a while to learn the techniques. Unlike an arcade game, this game requires a considerable investment of your time and intellectual effort to master. The rewards for this investment are correspondingly greater.

Designer's notes

Some complaints about game design emerged during playtesting. The first is that the logistics rules are wrong. The random element of supply rankles some players. Supply on the Eastern Front was not a certain thing. Sometimes the supplies got through; sometimes they didn't. Probability enters the picture in only two situations: when the supply path becomes twisted and during winter.

Another complaint concerns the aggravation of traffic jams. This is particularly irritating when two units attack a surrounded unit. Typically they destroy their victim but crash into each other. This prevents any further motion until their paths are straightened out. After much consideration I decided to leave the traffic jams in. Traffic jams were very much a part of Eastern Front combat. Besides, the problem can be minimized with careful planning. For example, if you have a Russian unit surrounded from two sides, it is quite possible to give orders that work. The diagram illustrates the solution:
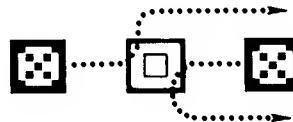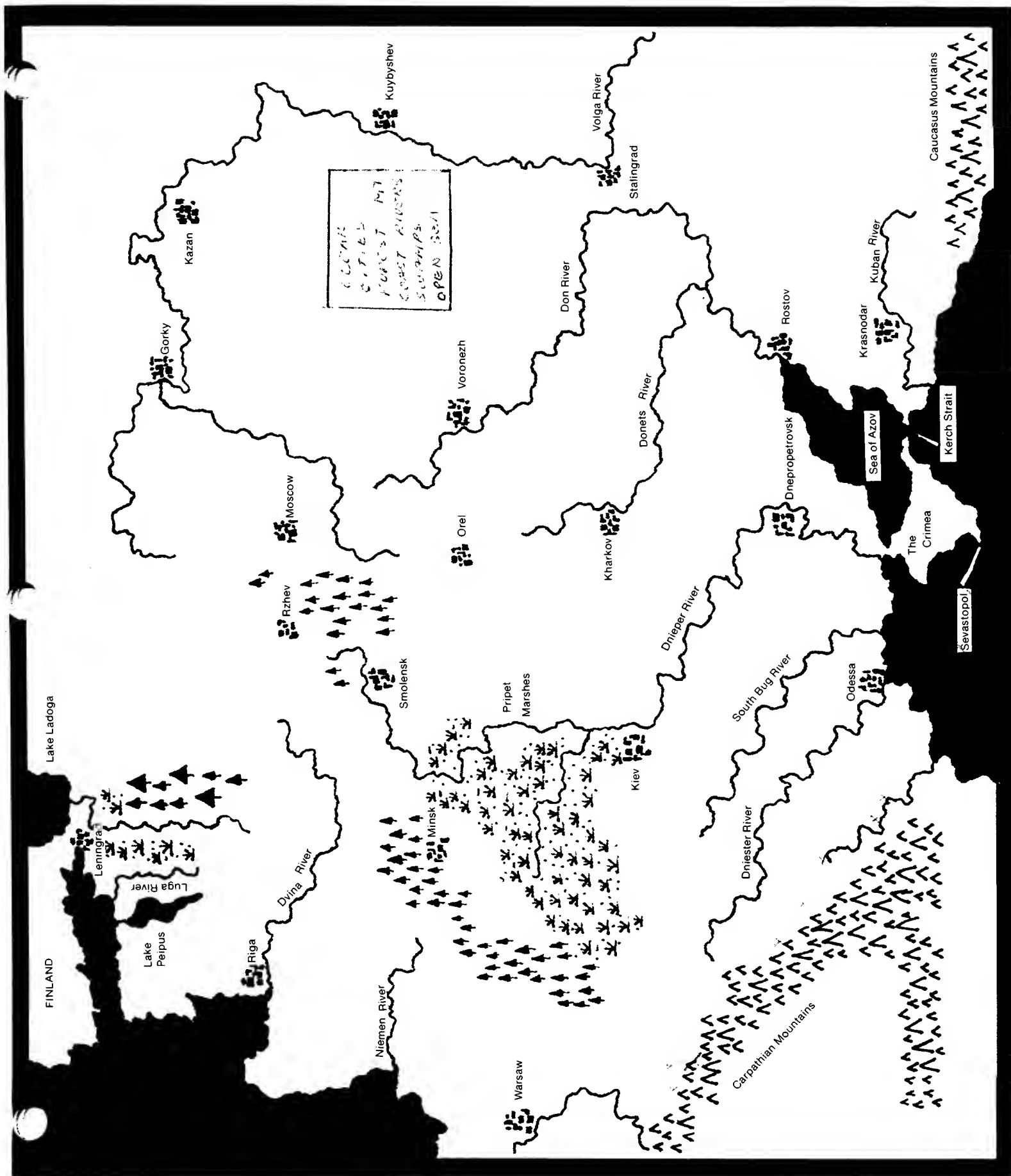

Figure 3   Escape path for a surrounded unit

Having addressed the most obvious of the games's flaws, I now turn to the pleasant task of discussing the game's strong points. The graphics elements are the most obvious. They are also the aspect of the game that I can take least credit for. Designing graphics on the ATARI Computer is like riding a spirited horse— you loosen the reins and let it fly. Indeed, this game does not use all of the graphics capabilities of the machine. The game doesn't make use of one of the players, all of the missiles, player/playfield priorities and collision detection, four-color character sets, real-time color register indirection, and dynamic display lists. Thus, it makes use of only about 75 percent of the graphics capability inherent in the machine. Much learning lies in front of us before we can say that we have mastered this computer.

I take great pride in the input/output structure of this game. The joystick, graphics, and sound are integrated into a smoothly operating system. I spent nearly a month designing this arrangement, and another month implementing it. I wanted to design a game playable with only the joystick.

I failed. In the end, there were those three buttons (START, OPTION, and space bar) that you must also use to play the game. Those were painful concessions. Other game features were abandoned when I realized they could not be implemented without recourse to more keystrokes. I refuse to design a human engineering monstrosity.

The feature I'm most proud of is the artificial intelligence the game uses. It is a trifle presumptuous of me to call it artificial intelligence, for the computer does not learn from its mistakes, nor does it adjust its strategies in direct response to the your move. However, it does analyze its position, it can recognize danger and opportunity, and it can react accordingly. It avoids (but cannot prevent) traffic jams. It also recognizes the combat value of terrain and plans its moves accordingly. The computer plans its moves while you work on your moves; this is accomplished with a vertical blank interrupt routine that separates the two processes. In effect, the computer is executing a technique called multitasking. The technique was difficult to implement but the result is well worth the effort. The other nifty aspect of the intelligence algorithms is that they are convergent appoximations. The computer starts off with a rough guess of its best move, then refines it a little, then a little more, then a little more, and so on until you finally press the START key. Because of this approach, the computer is always ready to begin a move, and yet will take the time to plan a move carefully if you let it. You're never forced to wait for the computer.

This published version of EASTERN FRONT (1941) is the 317th version of the program. It took me eight months to complete. I am glad it's finished (and so is my wife).

Review Form

We're interested in your experiences with APX programs and documentation, both favorable and unfavorable. Many of our authors are eager to improve their programs if they know what you want. And, of course, we want to know about any bugs that slipped by us, so that the author can fix them. We also want to know whether our instructions are meeting your needs. You are our best source for suggesting improvements! Please help us by taking a moment to fill in this review sheet. Fold the sheet in thirds and seal it so that the address on the bottom of the back becomes the envelope front. Thank you for helping us!

1. Name and APX number of program.

_____

_____

2. If you have problems using the program, please describe them here.

_____

_____

_____

3. What do you especially like about this program?

_____

_____

_____

4. What do you think the program's weaknesses are?

_____

_____

_____

5. How can the catalog description be more accurate or comprehensive?

_____

_____

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program:

_____ Easy to use
_____ User-oriented (e.g., menus, prompts, clear language)
_____ Enjoyable
_____ Self-instructive
_____ Useful (non-game programs)
_____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

_____

_____

_____

8. What did you especially like about the user instructions?

_____

_____

_____

9. What revisions or additions would improve these instructions?

_____

_____

_____

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

_____

_____

11. Other comments about the program or user instructions:

_____

_____

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[seal here]

EASTERN FRONT (1941)
by Chris Crawford

Recommended for teenagers and up/Written in machine language

Editor's Note: EASTERN FRONT has earned Chris Crawford the 1981 Charles Roberts Award for Best Adventure Game for Home Computers and *Creative Computing's* 1981 Award for Exceptional Creativity in Programming.

Operation Barbarossa, the German invasion of Russia during World War II started a campaign lasting nearly four years and taking nearly 20 million lives. Could you have done better than the real German commander? See how well you can maneuver your troops to obtain a good position before the winter sets in and the Russian counter-offensives begin!

EASTERN FRONT is an exceptionally complex one-player wargame. It re-creates the conditions of the campaign, including terrain, seasons, and types of military units, and it adjusts these factors over time. The game closely follows the historic sequence of events. The Germans sweep in, wiping out Russian armies everywhere. But the Russians keep fielding new armies and the Germans, depleted by a long campaign, start to wear down upon approaching Moscow. Reaching Moscow as the mud season sets in, the Germans fail to take the city. They resume their offensive thrust during the winter, making further gains, but they can't achieve decisive results. Their rapidly fading strength combined with the growing Russian strength first halt their advance and then force them to retreat. Your goal is to see if you can change the course of history, given the same physical conditions the German troops faced.

Each turn in EASTERN FRONT covers one week of history. To help you plan your moves, you can display vital information about a unit's muster and combat strength. For realism, you can move your troops only so far within a week. At the same time you're figuring your strategy, the computer is working out the Russian maneuvers. Hence, the longer you take to work through your moves, the more time the computer has to plan its own moves. (However, EASTERN FRONT has a handicap provision for novice wargame players.) Then on your command the computer simultaneously executes all orders. It moves troops and fights battles, taking into account terrain, type of unit, season, and presence of other units. Then it performs a variety of calculations related to the passage of time, including updating the date display, reconfiguring the map for the season, bringing in reinforcements, adding replacements, figuring logistics, and extracting penalties for troops whose supplies are cut off. At the end of each week, the computer evaluates your performance and assigns you a score.

The use of intricate artificial intelligence routines makes EASTERN FRONT a challenging wargame. EASTERN FRONT also makes exceptional use of the technical capabilities of ATARI Home Computers. The result is a wargame that outshines virtually any other wargame available.

REVIEW COMMENTS

This is the best computer wargame you've ever seen. The graphic display is incredible.

Because EASTERN FRONT eliminates the drudgery of playing wargames, many people who've never cared for wargames before can enjoy this one.

The game takes two or three hours to play and you can't save it, so be prepared for a marathon.

The user manual is VERY GOOD.

CHRIS CRAWFORD

About the Author

Chris Crawford of Fremont, California, is one of the ATARI Home Computer's greatest fans and most imaginative programmers. By developing Eastern Front and other games, Chris has extended the frontiers of understanding concerning the ATARI Home Computer's capabilities, especially its graphics potential. Chris prefers to design thinking games for adults, rather than arcade-style action games aimed toward younger players. This wholly self-taught programmer and former junior college physics teacher now supervises a games research and development team at Atari. Chris writes more than software, however. He is also an author of *De Re ATARI* (available through APX), a progammer's handbook that explains the concepts and principles behind the internal structure of ATARI Computers. In addition, Chris is an actor, of sorts. He has entertained many ATARI seminar attendees with the Mr. Chip suit he dons to explain the computer's different chips and their interworkings. Look for more mentally stimulating games from this super talent.

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